



# Stream Protection -- Exotic Plant Control

## Introduction

The Shenandoah National Park exotic plant survey affirms the general opinion of botanists and vegetation management professionals that exotic plants infest streamsides and riparian zones at a greater rate than other areas. This is especially true within the forb layer. Infestation of rich streamsides and riparian zones is especially worrisome due to direct impacts to other flora and fauna and environmental impacts to complex ecosystem structure and functioning.

## Invasive Exotics Problematic in Streamsides and Riparian Zones

- In the Ridge and Valley physiographic province, streams and riparian zones are typically found within incized valleys that experience diurnal wind flows where cool evening air flows downhill and warm daytime air flows uphill. *Such breezes are conducive to daily seed dispersal.*
- Prevailing westerly and northwesterly winds follow stream channels up and over the Blue Ridge Mountains. *Prevailing winds disperse seeds.*
- Streams and riparian areas are ecological focal points for wildlife watering and travel corridors. *Wildlife act as vectors for seed dispersal.*

## Shenandoah National Park and the Mid-Atlantic Exotic Plant Management Team Actively Control Exotics Along Streamsides and Riparian Zones

- FY 1999: *Pueriaria montana* (kudzu) control adjacent to Rapidan River.
- FY 2000-01: *Paulownia tomentosa* (princess tree) and *Ailanthus altissima* (tree of heaven) control along streams harmed by the 1995 Flood Event (i.e., South Fork Moormans, Rapidan, Staunton, etc.).
- FY 2000-03: *Celastrus orbiculatus* (Oriental bittersweet) control near Hogcamp Branch of Rose River and Pass Run.
- FY 2002-04: Exotic plant control within Rapidan Camp near Rapidan River.
- FY 2004: Exotic plant control within the Limberlost natural heritage area.

## Doing Your Part

To prevent the spread of exotic plants into natural areas, we encourage you to . . .

- Avoid planting exotic pest plants. Do not dump yard wastes in natural areas.
- Purchase native, not exotic, plants for landscaping or land restoration projects.
- Stop exotic pest plant impacts on your property by either removing them or by preventing them from entering.
- Ask local nurseries and garden shops not to sell invasive pest plants.

Park employee and volunteer stand ready to treat exotic princess trees in the South Fork of Moormans River.



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**Exotic Invasive  
Species Near  
Streams of  
Shenandoah  
National Park**



**Mile-a-minute vine**



**Kudzu vine**



**Oriental bittersweet vine**



**Golden bamboo**



**Princess tree**



**Tree of heaven**



**Japanese stiltgrass**



**Multiflora rose**



**Garlic mustard**

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**Exotic Invasive  
Species Information  
on the Web**

Alien Plant Workgroup, Weeds Gone Wild • [www.nps.gov/plants/alien](http://www.nps.gov/plants/alien)

Bureau of Land Management • [www.blm.gov/education/weed/weed.html](http://www.blm.gov/education/weed/weed.html)

Natural Resources Conservation Service-Plants National Database • <http://plants.usda.gov/>

The Nature Conservancy • <http://nature.org/initiatives/invasivespecies>

USGS, National Biological Information Infrastructure • <http://invasivespecies.nbii.gov/>

Virginia Invasive Species Project • [www.dcr.state.va.us/dnh/invproj.htm](http://www.dcr.state.va.us/dnh/invproj.htm)